Consolidated Technology Services • WA

Wi-Fi Project Update

April 3, 2012

KEY WI-FI BUSINESS OBJECTIVE

Develop and implement a secure statewide enterprise Wi-Fi service providing agency employees and guest agencies greater mobility and productivity.

RECAP

November 2012, CTS launched a project to determine the feasibility of deploying an Enterprise Wi-Fi Service offering. The feasibility effort would need to take key factors into consideration.

How would the CTS Wi-Fi offering support the following drivers?

- ***Consistent User Experience*** - The OCIO 2012 Action Plan Item #6, Consolidate where appropriate…, identifies "A single Wi-Fi LAN service" as a means to provide a secure and consistent mobile user experience in all state office buildings.
- ***Mobile Workforce*** – State Wi-Fi deployments currently enable only two (2) use case scenarios; Local Employee and Guest. The third use case scenario, the ***Roaming Employee***, has not generally been considered until now. This is the scenario that prompted the OCIO to identify Wi-Fi as a priority for consolidation, providing the ability for a state employee to enter any state office building, or common area, and have direct and secure access to their agency's information technology resources.
- ***Security –*** Wi-Fi networks are particularly vulnerable to intrusion. An agency-centric approach creates an inconsistent security posture and puts the entire state network at risk. A consistent Wi-Fi security architecture and management discipline is needed to safeguard state IT resources against unauthorized access and data loss.
- ***Predictable Innovation*** – Wireless and related technologies (e.g. 802.11ac, MDM, BYOD, LTE) are evolving rapidly. An enterprise approach must ensure new innovations are developed and deployed in a timely and cost effective manner for the benefit of all subscribers.
- ***Enterprise Values*** - An Enterprise approach reduces design complexity, mitigates security and interoperability issues, shares innovation, supports efficiencies and maximizes cost benefits (economies and scalability).
- ***Standardization*** – No common design approach currently exists among agencies implementing Wi-Fi networks. The OCIO Action Item #6 recognizes a standard, secure infrastructure is needed and proposes that CTS take the lead to provide, "a better designed Wi-Fi solution".

DESIGN APPROACH

With the above drivers in mind, CTS adopted the following guiding design principles to develop an enterprise based Wi-Fi service:

- Align with the statewide Wi-Fi service vision described in Action Item #6 of the Washington State Technology Strategy
- Deploy a utility based Wi-Fi network infrastructure (including centralized controllers)
- Adhere to state Enterprise Security Standards
- Use of Identity based logon
- Support three (3) Use Cases – Local Employee, Roaming Employee and Guest Users
- Supports full CTS Enterprise Active Directory integration
- Promote economies and scalability through equipment/support standardization
- Budget stabilization through high volume discounts and long-term vendor partnerships
- Develop consistent commodity based full service cost model

SERVICE PRINCIPLES & GOALS

The outcome of the CTS Wi-Fi Service deployment will be expected to meet the following Strategic Principles and Goals:

- ***Technology Innovation*** *– ability to deliver technology and feature advancements to state government in a timely and effective manner.*

- ***Common "Enterprise Security Infrastructure"*** – supports standards, practices and technical maintainability.

- ***Common "Wi-Fi Network Utility Infrastructure"*** – single architecture supports more effective IT solution development, roll-out and maintainability.

- ***Common End-User Experience –*** State employees and guests can roam to any state office building and access their authorized resources using the same procedure, user ID/password, and security protocol.

- ***Workforce Productivity*** – supports the state goal of a highly productive workforce through greater mobility.

- ***Secure & Guest Wireless Connectivity*** – provides secure connectivity to all Enterprise users, at all service locations, as well as a guest environment.

- ***Reduce Unnecessary Duplication*** – reduces overall technology design, acquisition and on-going technical/maintenance/contracting support costs.

- ***Better Economies of Scale*** – greater equipment/services buying power with 10,000 units versus 50-100 units at a time.

BUSINESS RISK ASSUMPTION:

Currently, the expectation is CTS will assume all the up-front financial risk for equipment and resource costs for the service analysis and testing effort.

As with any new service deployment, it comes with higher financial risks. The need to share in the risk of enterprise solutions is essential to a strong start and successful conclusion.

Financial Risk Sharing (Pool):

- ***Customer Use Commitment*** - volume and durations provides better Day 1 and long-term pricing leverage.
  Customer Install Commitment – covering the cost of building surveys, communication and/or power cable work.

ENTERPRISE WI-FI SERVICE DELIVERY COMPONENTS:

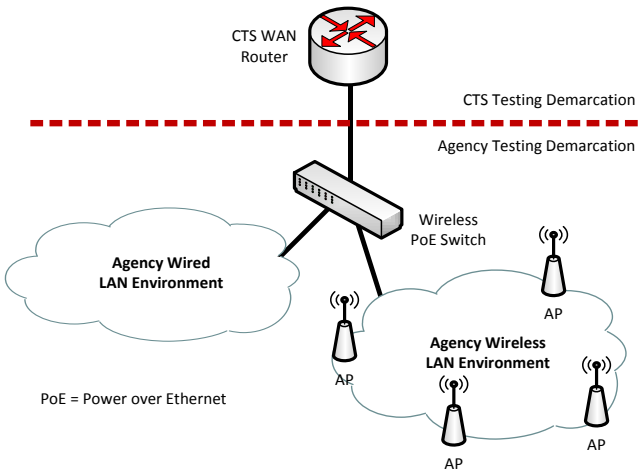
- ***Service Core*** - CTS will install, maintain and support the Wi-Fi core infrastructure; Controller(s), Identity Service Engines, security and management platforms.

- ***Acquisitions*** - CTS will purchase agency building Access Points (AP) equipment in quantity to maximize costs savings. PoE purchase will depend on customer needs.

- ***Service Support*** – we need to define the line of demarcation and describe the service management benefits – performance stats, reports, etc.

- ***Installation Coordination*** - CTS will establish an installation path with vendor partners to facilitate customer agency installation tasks such as site surveys, PoE cabling and Access Point installation.

WI-FI Service Support Demarcation:



ENTERPRISE WI-FI COST MODEL (estimated):

Proposed Monthly Rate: $33/AP

- CTS service includes equipment purchase, vendor installation assistance and service management (levels and demarcation TBD).
- Customer agency would be responsible for building spectrum surveys, intra-building cable work and power work (if required) costs.
- The unit AP rate is based on an initial customer deployment commitment of 2,000 APs.

WI-FI PROJECT MILESTONES:

• Proof of Concept (Roaming Secure User scenario)	100%
• CTS Wireless Core Design Development	95%
• Phase 2 Pilot Equipment/Services “Bill of Materials”	95%
• CTS Wi-Fi Service Cost Model (v1) Development	95%
• Identify Agency Phase 2 Pilot Project Participation	10%

PHASE 2 PILOT NEXT STEPS:

• Finalize acquisition for CTS Core and customer AP equipment	5 days
• Negotiate formal agreement with participating pilot agency	5–7 days
• Equipment delivery and receipt	30-45 days
• Installation and Test Validation of equipment	15 days
• Launch Pilot “User Case” Testing Window	30 days
• Phase 2 Pilot Technical/Business Report and Recommendation	10 days
• Wi-Fi Service Production Deployment Decision Date	July
• Phase 3 Service Deployment planning and execution	

Discussion: